

**IN THE CLAIMS:**

Claims 1-16 (canceled)

17. (New) A method of producing a silicon ingot, comprising:

producing a silicon ingot having growth defects under the following conditions:

(1)  $1.15 \leq (G_{1\text{edge}}/G_{1\text{center}}) \leq 1.25$ ;

(2)  $0.5 < (\text{OSF ring inner diameter/crystal diameter}) < 1.06 \times (G_{1\text{edge}}/G_{1\text{center}})^{-0.2}$

where

$G_{1\text{center}}$  is a temperature gradient in the axial direction at the crystal center in the temperature region from the solid-liquid interface temperature to approximately 1350°C and  $G_{1\text{edge}}$  is a temperature gradient in the axial direction at the crystal edge in the temperature region from the solid-liquid interface temperature to approximately 1350°C; and

cutting the wafer from portions, of the produced ingot, in which the inner diameter of the OSF ring is at least 1/2 the crystal diameter.

18. (New) A method of producing a silicon ingot, comprising the steps of:

controlling the  $G_{1\text{edge}}$  and the  $G_{1\text{center}}$  of the ingot so that:

(1)  $1.15 \leq (G_{1\text{edge}}/G_{1\text{center}}) \leq 1.25$ ;

(2)  $0.5 < (\text{OSF ring inner diameter/crystal diameter}) < 1.06 \times (G_{1\text{edge}}/G_{1\text{center}})^{-0.2}$

where

$G_{1\text{center}}$  is a temperature gradient in the axial direction at the crystal center in the temperature region from the solid-liquid interface temperature to approximately 1350°C and

Serial No. 09/856,209

$G_{\text{edge}}$  is a temperature gradient in the axial direction at the crystal edge in the temperature region from the solid-liquid interface temperature to approximately 1350°C; and

cutting the wafer from portions, of the produced ingot, in which the inner diameter of the OSF ring is at least  $1/2$  the crystal diameter.